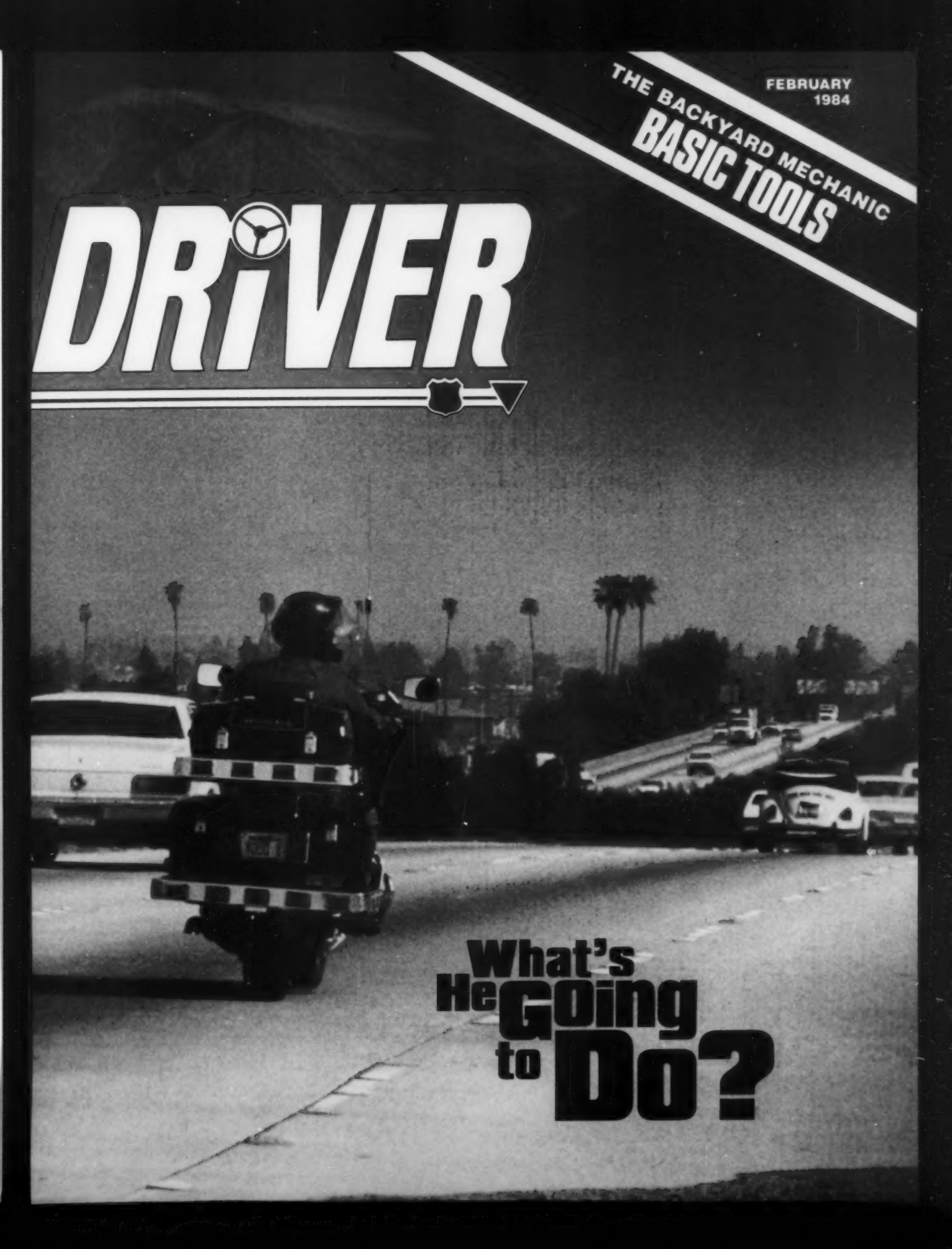
FEBRUARY
1984
THE BACKYARD MECHANIC
BASIC TOOLS
DRiVER
What's
He Going
to Do?

DRiVER

Observing the CLUES

It doesn't take a crystal ball to predict another driver's actions. Simple observation may help.

(above)
If you can see the driver in his rearview mirror, obviously he can also see you. But don't make the mistake of assuming that he *does* see you. He might move in any direction without checking his mirrors.

(left)
Watch parked cars as you approach them on the street. If there's a driver behind the wheel, he could pull away from the curb with no warning.

Defensive driving is usually defined as "watching out for the other guy." What is meant by that phrase? Obviously, we should expect the other drivers on the road to do the unexpected, but that's not very helpful advice. It sounds very uncertain. What else could be meant by "watching out"?

Here, we mean *observation.* Driving is a matter of experience, and you can gain a lot of that by observing. If you are alert and watchful, not only of what you're doing but also of what the other drivers are doing, you can pick up some valuable experience.

A few months ago, we gave a list of visual clues developed by the police to identify drunk drivers ("The Customer is Always Wrong," August 1983). It occurred to us that a similar list could be useful to predict what the average non-drunk driver will do. So, the purpose of this article is to cite some examples of things to watch for that might help you guess "the other guy's" move.

Note, we said "might." There is no guarantee that you can predict what another driver will do. However, watching the behavior of the other drivers and the conditions and actions of their cars will make you a more alert and aware driver — and therefore a safer driver.

We'll start by telling you some actions of the car to watch and then go on to some observations of the driver.

Signaling: Watching the lights and signals on the car can help you figure out what's about to happen. Turn signals can give an indication, but they're tricky because the presence of flashing turn signals doesn't necessarily mean any one thing. It might mean that the driver is signaling for a turn and will do so as soon as it is safe. On the other hand, it might mean that he or she has already made a turn and the car's signals won't cancel automatically, and he or she hasn't heard the clicking. Or it might mean that he or

continued

THE TRAFFIC SAFETY MAGAZINE FOR THE MILITARY DRIVER

DRIVER

DEPARTMENT OF THE AIR FORCE
HQ AIR FORCE INSPECTION
AND SAFETY CENTER
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1984 14

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THE EDITOR SPEAKS

DOUBLE CLUTCH

AFTER DARK

Did you know that your ability to see at night decreases with age? About twice as much light is needed for a given visual performance for each increase in age of 13 years. If you are slightly nearsighted and not wearing corrective glasses, you may need four or five times more light than a person your age with perfect vision.

Merrill Allen, professor of optometry at Indiana University, has written a book in which he advocates running lights on the tops of cars that would remain on whenever the motor is running and green taillights that would turn red when the car was braking or stopped. He also wants more lights on cycles and lights on pedestrians, too.

In his book, "Vision and Highway Driving," Allen points out that many visual skills needed for safe driving are not covered by state licensing tests. They include peripheral (side) vision, the ability to judge distances and shift focus quickly, and the ability to recognize and distinguish colors. Allen also faults our street lighting, much of which he considers inadequate. He says every study that has been done shows that as illumination goes up accidents go down.

If you require corrective lenses, be sure you wear them whenever you drive or ride, especially at night. Allen says a driver with 20/50 vision driving on an unlighted street is severely handicapped — about like a driver with 20/20 vision turning off three of his four headlights or wearing two pairs of sunglasses. Keep your windshield and headlights clean. Try to read a newspaper with the light from your dirty headlights and then see the difference in available light after you wash them. You may be surprised.

observing the clues

continued

Dirty glass cuts down on the ability of a driver to see out, and it increases glare from sunlight or headlights. Be careful around any automobile that has its windows obscured by film or dirt. Maybe the driver doesn't see you.

she has accidentally hit the turn signal lever and has no intention of changing lanes or turning.

And the absence of a flashing turn signal doesn't mean the driver will not turn, of course. Drivers often make lane changes and turns without signaling. In fact, many never use the signals. So there are no guarantees, and that's why you must always be alert.

If you watch a driver for a short time, you will have a good idea of what is going on. If he or she is signaling but not turning (and nothing prevents the turn), he or she is probably unaware of the signal. The best policy is to treat any car that is signaling as though it were about to change lanes or turn. If you intend to enter the space he or she is signaling toward, make sure he or she knows what you're about to do. Honk your horn to get his or her attention if necessary.

Lights: When you see a car's headlights flashing from dim to bright and back, you can be sure the driver wants the other traffic to get out of the way so he or she can move faster. It's best in these situations to give the car

continued

What guarantee do you have that the car to the right will not enter your lane? Or the car to your left? Just because they are not signaling, don't assume they will not take your right of way.

(above)
This car has just begun to move over in front of you, without signaling its intentions. In such cases, if the other driver wasn't looking for you and you weren't expecting to be interfered with, you could have two bent cars, at the very least.

(right)
The action of looking for a favorite song is only one distraction that could take the driver's attention away from the road. Others include eating, talking, applying makeup or even smoking.

room and let it go. The driver is probably too impatient to wait. If he or she is not quickly given the space to move, he or she might quickly go around the car in his or her way, so watch for this even if you aren't the one directly in the way.

Lane position: The car's position on the roadway may tell you something about what it will do. In a left lane, the car may turn left, and in a right lane, it might turn right. On a highway, the car in the left lane will probably move faster than other traffic. Those in the right lane may leave the freeway at the next exit. Traffic in the middle lanes will probably continue along the same path.

Again, there are no guarantees. Any car might switch to another lane at any time.

The position within the lane could give an indication of the intended movement. A car squeezing to the left or right of the lane, or "riding the line," might be preparing to move over or turn, unless this is the position the driver habitually takes.

When a car is along the side of the road, you should be careful even though it is not in traffic. If a car is moving along the shoulder of a highway, it could suddenly attempt to re-enter the flow of traffic. A car parked at the curb of a street with the driver behind the wheel might abruptly turn into a traffic lane, so watch parked cars carefully.

Sudden motion: Certain other clues can alert you to the next motion of a car. A sudden shift in the body lean or the load distribution of a car (even the passengers) can tell you it is veering to one side or the other. The sudden appearance of the car's backup lights means it is going into reverse.

Acceleration and deceleration: Sudden changes in speed, upward or downward, have their own signs. A spurt of exhaust smoke can mean the car is speeding up. Tire noise can also signal acceleration. A fishtailing motion of the car's rearend, especially on slick road surfaces, shows speed and perhaps loss of control.

Tire noise could also signal that the car is braking suddenly. The brake lights are a signal, or course, but a car's taillights might not be functioning so don't depend solely on them. The car's nose quickly dipping shows rapid deceleration.

Car condition: The car's condition might mean something, too. Here are a few ideas.

Crooked bumpers and dented fenders can give you a clue about the driving habits of the other motorists. Obviously, they could be evidence of an accident that was no fault of this particular driver. But just as easily, the damaged car could show you a driver who pays little attention to what's around him or her. In a parking lot, you shouldn't park next to a car like that. You should figure the driver doesn't care about the condition of his or her car and might dent your car with his or her door. Likewise, on the road, it could be a good idea to give such a car extra room.

How the car rides is another possible clue. A severe tilt to one side or another could be bad suspension, underinflated

continued

(above)
Here's a car signaling for a right turn. Will it make that turn or keep going straight? Don't place any heavy bets one way or the other.

(left)
The brake lights, of course, mean the car ahead is slowing down. Other clues for deceleration are tire squeal and the nose of the car suddenly dipping.

tires or even different sized tires. A car that doesn't track straight could have wheels that are out of alignment, or it could be damaged. Whatever the reason, these things don't show much concern for the repair of the car, and maybe not for the way the car is driven, either.

Visibility: A question to ask yourself about the other driver is "Can they see me?" A quick look at the condition of the glass in the car may give you an idea of whether they can, or even if they care. If the windows of a car are so smeared with dirt that you can't see in, the driver probably can't see out very well, either. If the driver can't see out, it might mean that he or she doesn't try to observe around the car and therefore doesn't care that the windows are obscured.

Another quick glance, this time at the mirrors, can also give you some evidence to conclude whether they can see you. Are the mirrors broken or missing? Are they turned in the wrong direction? When you are directly behind another car, look into the mirrors to find if you can see the driver in them. If you can't see the driver, he or she can't see you.

Of course, other things can stop the driver from seeing you. A car can be so loaded with packages or cargo — or even extra passengers — that the driver can't see you even when looking out the rear window.

If you think the driver doesn't see you, it is best not to get in the way or get into a position where he or she can get in yours, until eye contact is made between the two of you.

Driver behavior: Now we'll switch to observations of the driver him or herself and what he or she is doing. Such observations can provide useful clues to use in predicting his or her behavior.

When you can see the driver, watch to discover if he or she is paying attention to the road or not. The driver's posture may give you a good indication. If the driver is sitting upright behind the wheel, he or she is likely to be more attentive to driving than if he or she is slumped down and only the top of his or her head is showing.

Hands: Where are the driver's hands? Both hands on the wheel is better than one hand on the wheel and the other arm draped over the back of the seat.

The driver can also be peforming other tasks while driving. Smoking is the most common, and it might not cause any trouble unless the driver becomes distracted by dropping the cigarette or some ash in the wrong place. However, smoking is not the only non-driving task done behind the wheel. Some people try to eat a quick sandwich from the drive-in, or drink some coffee or a soft drink. These efforts take too much of the drivers' attention away from the driving, just to guard against dropping something in their laps.

There are other activities that could cause danger to you. Some drivers attempt to put on makeup while driving — surely too involved an effort for the car. Some drivers will try to read something, usually a map, while in motion. That not only takes attention but also concentration, and the activity of driving can't help but suffer.

continued

With this amount of cargo in the back of the car, will the driver be able to easily spot you? If you don't think he can see you, give him more than the usual amount of space.

A driver with only one hand on the wheel could be a little too relaxed. Worse yet is the driver who is slumped down in the seat. A little observation can tell you who might be alert and who might be (mentally) on vacation.

Drinking: Of course, the most distracting manual activity of all is drinking alcohol behind the wheel. The drinking takes some concentration, but one of its effects is the destruction of the *ability* to concentrate. If you see anything in a driver's hand that looks like a container for alcohol, avoid him or her. In most places, having an open container for alcohol in the car is illegal, so you should seek the police, who can take care of the problem.

Conversation: Another aspect of driver behavior that has nothing to do with the hands could affect the driver's concentration. If the driver is talking to a passenger, watch how he or she does it. If the driver can keep his or her eyes on the driving, he or she is safer to be around than if he or she has to look constantly at the other person in order to communicate. Now that we think of it, some people seem unable to talk without using their hands to be more expressive, so maybe even conversing is a manual activity.

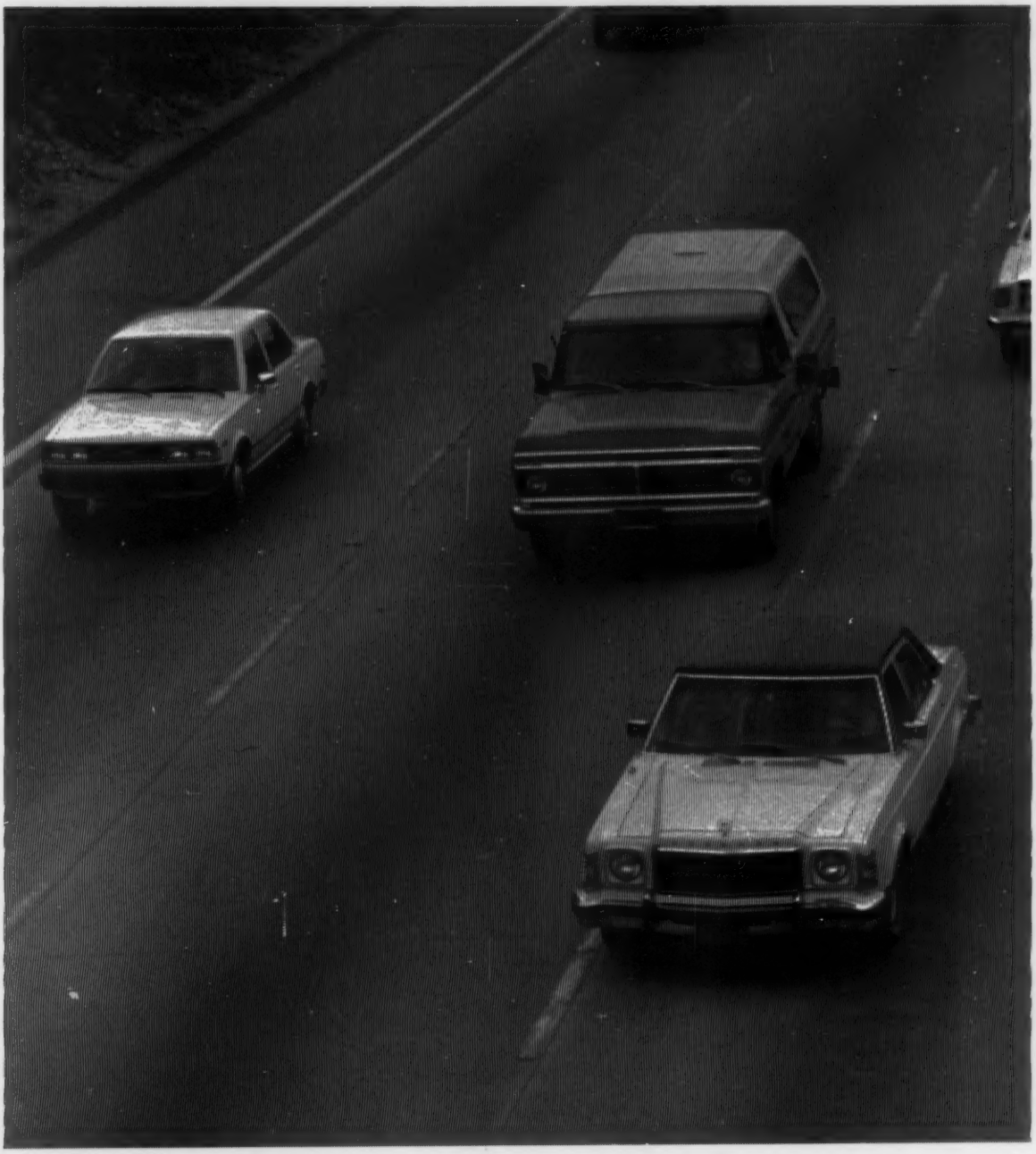
Rubbernecking: Watch the driver's head and eyes. One who looks around at the traffic conditions is probably more alert and attentive to the job of driving. If the driver makes eye contact with you, he or she probably is aware of your presence. Note the word "probably." Too much head movement could mean the driver is sight-seeing or "checking out" the other drivers and not their driving.

Driving habits: Certain habits of the driver might tell you what he or she is going to do, after watching him or her for only a short time.

As we mentioned earlier, the presence or absence of flashing turn signals doesn't necessarily mean anything. But now we're dealing with the human element. Watching drivers carefully could give you an idea of what they will do. Most people use their signals and use them correctly, but there are individual differences. Some people signal for half a block before turning. Some people change lanes as soon as their signal begins to flash. Some people signal for turns and not for lane changes, or vice versa. You have to watch them and be prepared for *anything*.

However, even when signals aren't used, you can sometimes predict a driver's actions by the manner in which he or she controls the lane. Is the car smack in the center of the lane, or does the driver hold to the left or the right? You should be aware of how the other drivers ride within their lanes because that will help you figure out what their next move is.

For instance, if a driver rides the line on the left side of the car, you can be fairly sure he or she is going to change lanes if the car edges to the right, even if the turn signals aren't flashing. But we'll say it again — there are no guarantees. If the driver on your right is hugging the left side of his or her lane, always expect that



Some people like to ride along at the right side of their lanes (and some to the left). You wouldn't know for sure until you had observed the car for a while whether this car is getting ready for a turn, or whether this is just the way the driver likes to control his lane.

car to move into your lane and be prepared to slow down or do whatever movement you must do to avoid it.

Quick observation of the car will show how much following distance the driver likes to allow and what his or her speed means. For instance, if the driver allows very little following distance behind you, you can bet he or she will speed ahead if you move out of the way.

Observe: These are just a few of the visual clues that can be used to make you a more alert driver. You may have others that you use to help you predict the actions of other drivers. If so, we'd like to hear them; write us.

Whatever way you can, try to develop your ability to see what's going on around you so that you can become a safer and more efficient driver.

SEATBELTS save lives

The Vaughns' car lies totally wrecked in a nearby junkyard. **(USAF photo by SrA Bev Warner)**

by Sgt MICHAEL P. VAUGHN

Hanscom AFB, Bedford Mass.
(Reprinted from *"The Hansconian"*)

Seatbelts do save lives. Just ask Sgt. Michael P. Vaughn of the Clinic's Bioenvironmental Engineering Services, who attributes the use of seatbelts to saving him and his family from death or serious injury.

The sergeant, his wife Christine and their two sons Christopher and Jason were traveling at approximately 30 mph on Bedford Road in Lincoln which is only three or four miles from the base. Mrs. Vaughn, who was driving, lost control of the car and hit a tree.

What could have been a tragedy for the Vaughns resulted in five stitches each for Sergeant and Mrs. Vaughn and a compression fracture of the spine for Jason.

"We were all very lucky," the sergeant said. "The car, a 1979 Mercury Monarch, was totalled. It was quite a mess."

Sgt. Michael P. Vaughn shows the seatbelt which saved him from serious and possibly fatal injury. **(USAF photo by SrA Bev Warner)**

Wearing seatbelts has been a rule in the Vaughn house from the beginning. "I aways knew they saved lives, but I never thought the day would come when they would save mine and my family's," said Sergeant Vaughn. "After the accident I was unconscious. I woke up in an ambulance with Jason but the first thing I thought of was the rest of my family. I found out they were safe, thanks to seatbelts."

Sergeant Vaughn said he cannot understand the many excuses people have for not buckling up before driving. "It takes no time to put seatbelts on, and once you get used to them you'll feel more uncomfortable without them. People should spend a week or two getting used to wearing seatbelts. It's a lot easier than getting used to living without your wife or child."

CRYSTAL BALL GAZING

Ever wish you had a crystal ball and could look into the future? The Automotive Information Council sheds a little light onto the future by forecasting what car buyers can expect new cars to look like in the next few years.

The cars of the '80s won't be the muscle cars of the '60s or the econoboxes of the '70s. The new cars will seek to combine both practicality and sportiness without compromising crashworthiness.

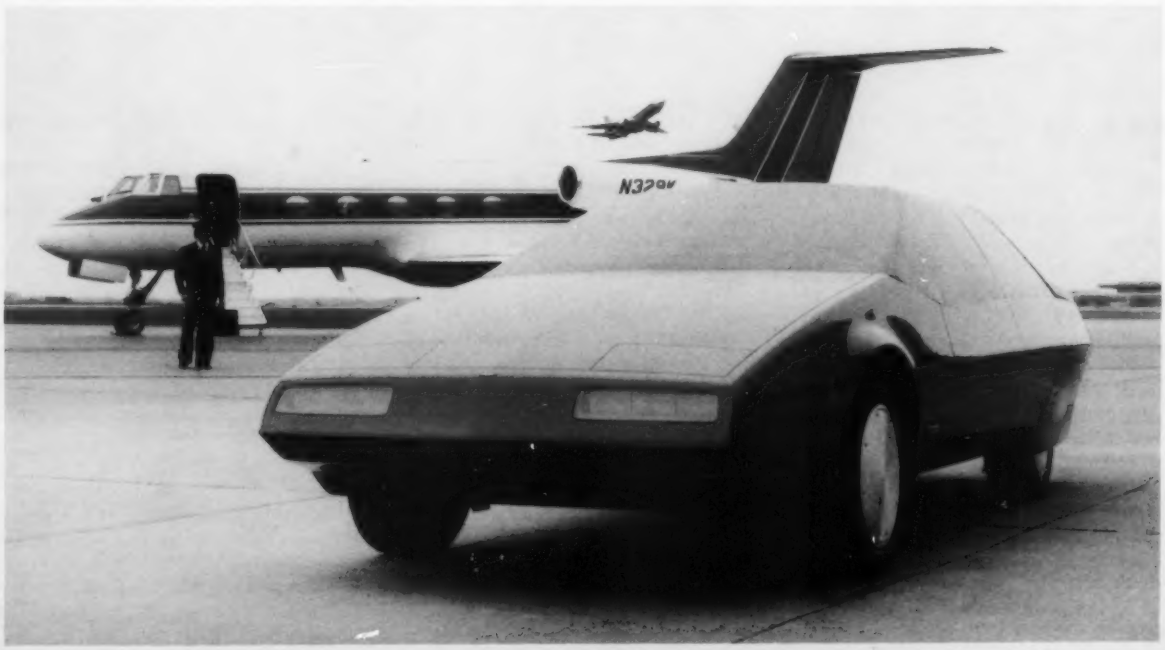
The automakers' engineers are meeting the design challenges presented through products with continued high fuel economy, increased performance and improved interior roominess.

Fuel economy improvements are no surprise as car buyers have come to expect them. However, the focus of the engineering methods used to squeeze more miles to the gallon has changed. Rather than just depending on the use of more fuel-efficient engines and weight reduction, improved aerodynamics will produce wedge-shaped cars with softer profiles. The designs will feature flush door handles, pillars and glass. Headlamps will be redesigned to reduce air resistance. All this will combine to give the cars a sleek, sporty look.

Performance changes will result from noticeable product improvements. There is a new emphasis on responsiveness, more zip on acceleration, better cornering and better overall handling of the car.

The car design will also incorporate improved use of space. There will be more interior space in a smaller overall package. This will be accomplished by using existing space more efficiently. There will be less body overhang. Additionally, stronger, thinner materials will be used without compromising the crashworthiness of the car.

The cars of the '80s will put the fun back into driving without increasing the risk to the driver and passengers.



"Too bad about (insert one of 58 names with appropriate Air Force rank)," a friend greeted you on Monday.

Caught off guard you replied, "Say what?"

"S/he bought it over the weekend," continued the friend.

You exclaimed, "No!"

"Yup," explained your friend. "Motorcycle accident."

At this point we could have saved you the trouble — and pain — of asking about the details because they're almost always the same.

If you asked, "Was s/he driving or just riding?" 91 percent of the time the answer was "Driving."

Asking "Whose fault was it?" would have netted the reply "The motorcycle operator's" nine out of 10 times.

Although few of you would have asked "Did the operator have any certified hands-on motorcycle skills training?" the answer would have been "No," 78 percent of the time.

"How big was the bike?" would have gotten the answer "larger than 500cc" in 83 percent of the cases.

If you didn't already know and asked, "How old was (insert one of the 58 names)?" the response would have been "Under 25" for 46 of the Air Force personnel or 78 percent of those killed.

"Was excessive speed a factor?" would have drawn a "Yes" in 63 percent of the mishaps.

Following that question with, "How about drinking?" Would have gotten you the same reply almost six out of 10 times. That reply would have been: "The Air Force operator was under the influence of alcohol with a blood alcohol concentration of .10 or higher." And of the 59 percent of the accidents where the operator was under the influence of alcohol nearly one in five had a BAC over .20.

"What happened?" would have been answered "The motorcycle didn't make a curve" 58 percent of the time. Excessive speed and failure to negotiate a curve combined in 39 percent of the mishaps.

Another question you weren't too likely to ask would have been, "Had the operator attended Air Force Regulation 50-24 Course VII, Motorcycle Challenges?" If you had asked it, the answer would have been "No" 36 percent of the time.

"How about Braking: Did the operator brake properly if at all?" If you asked the question in a third of the mishaps the answer was "No."

If you recalled that the operator hadn't had the accident motorcycle very long and asked an appropriate question, you were told three out of every 10 times "the

SAMENESS

California Highway Patrol photos

operator had six months *or less* experience on the bike s/he rode to his/her death."

"Was s/he wearing a helmet?" would have been answered "No" one out of four times.

If you asked questions about the operators' previous driving habits, in nearly one of five cases you were told that they "had one or more previous traffic violations."

If the operators didn't own motorcycles or you had just seen their undamaged machines you might have asked, "Whose bikes were they riding?" For 13 percent of the operators the reply would have to have been "a borrowed motorcycle."

Of course none of these answers makes you feel any better about the loss of a friend, but keeping the replies in mind could help keep the same thing from happening to another friend . . . or yourself.

1983 MOTORCYCLE FATALITIES

In 1983 58 Air Force personnel (53 operators and 5 passengers) lost their lives in 57 motorcycle accidents.

- 51 of the 57 mishaps were caused by motorcycle operator error
- 12 of the 53 Air Force operators had attended a certified hands-on motorcycle skills training program
- 45 of the 53 Air Force operators were using motorcycles in excess of 500cc engine displacement
- 46 of the 58 were under 25 years old
- 36 of the 57 mishaps were the result of excessive speed
- 32 of the 53 Air Force operators were under the influence of alcohol with .10 BAC or higher. In addition, 6 of these operators were over .20 BAC
- 31 of the 53 operators failed to negotiate a curve
- 22 of the 57 mishaps resulted from a combination of excessive speed and failure to negotiate a curve
- 19 of the 53 Air Force operators had not attended AFR 50-24 Course VII, Motorcycle Challenges
- 19 of the 57 mishaps were caused by improper braking or no braking
- 17 of the 53 Air Force operators had six months or less experience on the accident motorcycle
- 14 of the 58 fatalities were not wearing helmets
- 10 of the 53 operators had one or more previous traffic violations
- 7 of the 53 operators used borrowed motorcycles

OK, SPORTS FANS... TIME T' WATCH MONDAY NIGHT MARBLES!
CLICK
I WANNA WATCH MONDAY NIGHT HOP SCOTCH!
SURPRISE! SURPRISE! TONIGHT BIG BROTHER IS WATCHING YOU!
UNCLE DENSE IS IN THE TV AGIN'!
"DENSE" D-E-N-X-E
HAPPY NEW YEAR
198

WHAT MAKES YOU THINK 1984 WILL BE ANY DIFFERENT THAN 1974 OR 1964? YOU'VE FLUNKED THE DRIVING TEST FOR NINETEEN STRAIGHT YEARS... WHAT'S SO GREAT ABOUT THIS ONE?
LEMME WATCH THE CAT A MINUTE WHILE I THINK OVER THAT ONE...
MEOW!
1964, HUH? I CAN REMEMBER 1964... THAT'S THE YEAR I NEVER MADE IT OUT OF THE PARKING LOT...
...DON'T WATCH ME...
WATCH WHERE yer GOIN'!
DEPARMENT OF MOTOR VEHICLES

1976

DON'T WATCH THE FLUFFY CLOUDS...

WATCH those ROAD WORKERS!

1978

WATCH THE BIRDIES FLY BY LATER... RIGHT NOW,

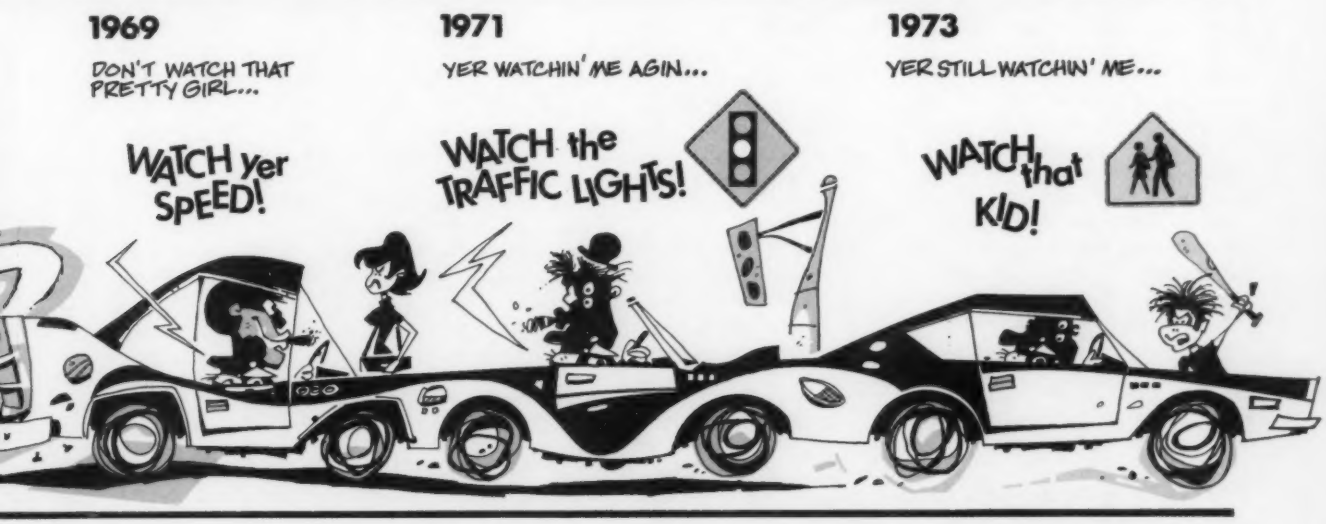
WATCH that CURVE!

1980

I TOLD YOU T'STOP WATCHING **ME**...

WATCH the ROAD CONDITIONS!

GOL-LY, LITTLE BROTHER, WHAT'CHA MAD ABOUT? I LIKE T' WATCH STUFF... PEOPLE... BIRDIES... TREES... ROCKS... WALLS... CEILINGS... DOORS... FLOORS... CARS... BOERS... BESIDES...
BESIDES WHAT, BIG BROTHER?
BESIDES, IT'S 1984 AND MAYBE THIS YEAR I CAN Get m'DRIVER'S LICENSE!
HE'S WATCHING YOU AGIN, POP
"LICENSE" L-I-C-E-N-X-E
DADDY! NOW HE'S WATCHING ME!
NO HE'S NOT... HE'S WATCHING ME!
WATCH IT, BIG BROTHER!
IAM! IAM!
CLICK CLICK CLICK CLICK CLICK
4


1969
DON'T WATCH THAT PRETTY GIRL...
1971
YER WATCHIN' ME AGIN...
1973
YER STILL WATCHIN' ME...
WATCH yer SPEED!
WATCH the TRAFFIC LIGHTS!
WATCH that KID!

1983
WATCH OUT!
SO I FIGGER I'M DUE, LITTLE BROTHER. AFTER NINETEEN FLUNKS, 1984 IS THE YEAR I MAKE IT! ...THAT CAT DON'T LIKE TO BE WATCHED, DO IT?
NO HE DOESN'T AND YOU WON'T GET A DRIVER'S LICENSE THIS YEAR EITHER...
I WON'T? WHY NOT?
BECAUSE I'M THE EXAMINER FOR THE DEPARTMENT OF MOTOR VEHICLES, THAT'S WHY, AND IF YOU THINK I'LL EVER GET IN ANOTHER CAR WITH YOU...
...STOP WATCHING ME, BIG BROTHER!
"EXAMINER" E-X-A-M-I-N-E-R
KELLEHER

True accidents

Following are a few reports of accidents involving Air Force members. We have removed names and references to dates and places.

SPEED, ALCOHOL

Operator number one sustained fatal injuries riding a borrowed motorcycle at a high rate of speed on a four-lane road. He failed to negotiate a curve, was ejected, and struck a tree. On the day before the accident, operator number one, on a three-day break from work, was visiting in town. That evening he decided to attend a party using a borrowed motorcycle as a mode of transportation. Although he had a helmet at home, he declined to wear it. Approximately 0230 hours, he left the party to take a friend home with the thought of returning to the party. On his return trip he was observed by a witness doing an estimated speed of 60 mph in a 35-mph zone on a four-lane road. Operator number one failed to negotiate a gradual left curve, hit a curb and was ejected head first into the trunk of a tree. A toxicology test revealed a Blood Alcohol Content of .18. Operator number one had not attended Course VII, and his driver's license did not reflect a motorcycle endorsement. He had been cited four times in the last two years; three of the moving violations were for speeding.

TOO FAST FOR CONDITIONS

Operator one and passengers one and two were in a pickup truck. Operator one was traveling south on a rural road approximately three and a half miles west of the base. Operator one was returning to a party at base housing. Operator one was traveling at an excessive rate of speed for the road conditions. The truck could not negotiate a curve. The truck crossed the yellow lines and hit a telephone pole. The accident occurred at approximately 0256 hours. The state police were notified and a state trooper was on the scene. The ambulance service arrived on the scene and administered treatment to passenger one but he was unconscious and unresponsive to treatment. Passenger one was transported to the hospital for observation and later transported to another hospital for treatment at 0320 hours. Passenger one was diagnosed as having severe head trauma. Passenger one remained comatose for six days until he died. Alcohol was involved in the accident. Operator one was charged with driving under the influence. He was treated for minor abrasions. Passenger two was treated at base hospital for shoulder injury and a bruised jaw. Passenger two was dismissed from the hospital after treatment and observation.

ALCOHOL

At some time between 1800 and 2300 hours, operator went to a local bar. Friends report seeing him there at 2300, that he seemed to be in a good mood but did not appear intoxicated. At 0030, he left to take a friend for a motorcycle ride. There were no witnesses to the crash. It was discovered by a passing motorist and reported to police at about 0130 hours. Police arrived at the scene at 0146 hours. Accident investigators theorize that motorcycle was westbound on two-way frontage road to the highway. After missing the entrance to the highway, he tried to gain access by crossing the grassy median. That area is very rugged, and full of signs and reflector posts. Motorcycle struck a post and flipped, throwing both people off. Both struck objects with their heads and were killed. The motorcycle skidded for 700 feet before coming to a stop. Neither the operator nor the passenger wore a helmet. The county medical examiner reports that the operator's Blood Alcohol Test (BAT) showed .250, extremely intoxicated.

MORE ALCOHOL

Operator number one was discovered at approximately 0555 hours lying in the middle of an access road near a base gate. He had worked from 1600 until 2300 hours and then proceeded downtown to eat. He returned to the barracks at an unknown time. At 0130 hours, he was seen leaving the barracks parking lot on his motorcycle. His whereabouts between 0130 and the estimated time of the mishap, 0300 hours, are unknown. Investigation at the scene of the mishap revealed that the motorcycle was traveling east at an estimated speed of 30 mph. Operator number one failed to negotiate a right hand curve. He attempted to slow the motorcycle by downshifting as indicated by skid marks. However, the motorcycle left the road surface and entered a dry three-foot ditch for 94 feet prior to impacting the sloped bank of the ditch. The impact caused operator number one to be ejected from the right side of the motorcycle. Operator number one impacted a four-by-four by-24 inch concrete post head first. The impact cracked the Z90 approved helmet operator number one was wearing and caused massive head injuries. Operator number one was transported to a medical center where he was pronounced DOA. An autopsy revealed that operator number one died upon impact with the concrete post due to massive skull fractures. A blood sample was taken from the liver resulting in an *alcohol content of .306.*

SPEED

Operator number one was traveling west on a two-lane highway toward the base. This area of highway is downhill and has several curves. Operator number one had just completed a slight left-hand curve. The road surface was wet due to melting frost from earlier in the morning. Evidence at the scene showed that operator number one lost control of his vehicle, at a high rate of speed, halfway through the straight area. Vehicle number two had just completed the 80 degree turn from the opposite direction and saw vehicle number one losing control and took evasive action to the right. Vehicle number two went as far to his right as he could go, bending the guard rail back eight to 10 inches. By this time vehicle number one had struck the tractor trailer head on. Vehicle number one was at least half way across the center of the road and was pushed back up the road about 30 feet, coming to rest facing in the opposite direction of travel. Operator number one received fatal injuries resulting from the collision.

Timely Topics

"HOT" CARS NO BARGAIN

Cars are no longer just stolen by joyriders. Professional car thieves are pros at altering vehicle identification and supplying counterfeit documents for stolen cars that are often sold at rock-bottom prices, says the Automotive Information Council.

While being offered a luxury car for an unbelievable low price may be tempting to some, buying a "hot" car is no bargain. If the police discover that a person has purchased a stolen vehicle, the auto is automatically impounded and the buyer isn't able to recover either the car or the money spent on it.

To avoid being stuck with a stolen vehicle, follow these tips when buying a used car:

1. Deal only with a reputable dealer or an individual you know and trust. Be on your guard if a seller has no fixed address or phone number.

2. Be very suspicious if the price of a car offered is substantially lower than normal, such as $2,000 for a late model luxury car.

3. A fresh paint job on an almost-new auto may indicate a coverup by thieves.

4. Don't buy a car that doesn't have all the proper paperwork. Check the car's Vehicle Identification Number (VIN) with the VIN listed on the title.

5. Avoid a deal if the seller absolutely demands cash.

6. Always obtain a receipt for the sale, which both parties have signed.

The Federal Bureau of Investigation's Uniform Crime Report says 1,048,310 vehicles were stolen in 1982.

SIZE OF THE AUTO ELECTRONICS MARKET

The worldwide automotive electronics market will exceed $14 billion a year by 1990 — seven times today's $2 billion — predicts Jerome G. Rivard, chief engineer of Ford Motor Company's electrical and electronics division. He further predicts that in the next 10 to 15 years the electronics value per vehicle should be approaching $1,400. Rivard said the electronics content of the average car in 1970 was about $25.

WHY ARE FIRE ENGINES RED?

About 10 years ago, experts said it would be easier to see fire trucks, particularly at night, if they were painted lime yellow instead of the traditional red. Of the 4,000 new trucks produced annually, 40 percent are painted lime yellow and about 5 percent of the existing fleets have been repainted that color.

Now, however, firefighters say it just isn't true that other traffic yields more readily to the yellow trucks and they are demanding a return to fire-engine red. One fireman says, "I drive a lime-yellow truck and people just don't get out of the way. The public can't tell us from a street cleaning machine."

Picking the most visible color for your private vehicle depends on where you do your driving. White is a high-visibility color some places, but not where there are long months of snow or a lot of sunny beaches and ocean. Insurance companies still think red is a good color for a car.

PROPOSED FEDERAL CRACKDOWN

Due to evidence of a direct correlation between the minimum drinking age and alcohol-related crashes, the National Commission on Drunken Driving has proposed legislation that would cut off federal highway aid to any state that does not set a minimum drinking age of 21. Their proposal also asked for establishment of mandatory fines for all drivers convicted of driving under the influence of alcohol.

BABY BOOM CAR BUYERS

There are 73 million men and women in the 17 to 37 year old age group, the so-called baby boomers, who represent about one-third of the U.S. population. According to William Heugh, manager of marketing operations for Pontiac, "By 1990 they will account for 42 percent of the population and will control 55 percent of the disposable income and will buy half of the new cars purchased." Auto marketing specialists for both the aftermarket and original equipment manufacturers are gearing market strategies to attract these buyers and create product loyalty.

PICKUP POPULARITY

In 16 states the most popular passenger vehicle on the road is a pickup truck. According to R.L. Polk statistics, a "truck belt" runs from the upper midwest down to Texas and through the Gulf States. Ford sells the most trucks in the northern states, while Chevrolet tops the pickup sales in the south. The most popular vehicle on the road in the upper midwest states is a Ford F-150 pickup. In the seven southern states the Chevrolet C-10 is the most popular vehicle on the road. **(AIC Newsletter)**

LEMON LAWS CATCHING ON

Since the first lemon law was passed in Connecticut in 1982, 15 other states have followed suit. Lemon laws permit aggrieved new car buyers to get their money back (or a replacement vehicle) when attempts to repair major defects fail or are prolonged.

In order for an owner to take advantage of the law, the car dealer or manufacturer must have made at least four attempts to correct the defect. Or an owner can claim protection if the vehicle has been in the shop for various repairs for a total of 30 days or more during the warranty period.

In the past, the burden of proving a car was a lemon was on the buyer. The new laws require the dealer to show that the vehicle is not a lemon.

Of course, residents of states that don't have such laws can still bring suit against the dealer or manufacturer.

PROMOTING SAFETY BELT USE

The National Highway Traffic Safety Administration has awarded about $200,000 to four health organizations to promote the use of safety belts and child safety seats.

The money went to the American College of Preventive Medicine, the Association for the Advancement of Health Education, the American Public Health Association and the American Red Cross.

"NHTSA is encouraging public health professionals to participate more fully in automobile occupant protection programs," Secretary of Transportation Dole said. "When safety belts and child safety seats appear as priority items on community health agendas, the public will have a greater understanding of the importance of their use to prevent injury."

tteecc!!h double tech with tsgt ron lathrop

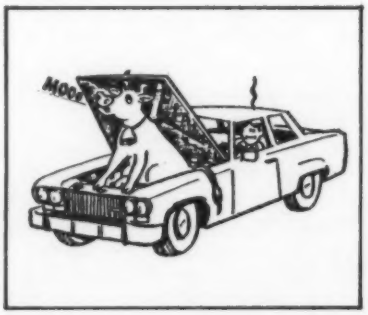
COMMENT: My 1972 pickup fogs the windshield and windows when the heater is on; also after we turn it off and the truck sits for a while. I have had a new heater core installed but the problem still exists. The mechanic says he does not know what causes it. The problem started in January 1983, with no trouble before that.

REPLY: I don't think I'm any closer to solving this one than your mechanic. Basically, it sounds like you have some water trapped in the ducts and all you can do is take them apart until you find the source. This will also happen when moisture is trapped anywhere in the vehicle, such as under the carpet, floor mats, anywhere.

COMMENT: Your answer regarding tire "cupping" in the October 1983 DRIVER Magazine is suspect in that I also experienced a similar problem with my 1980 import with radials that cost over $100 each (hardly cheap!) These small cars really don't have much weight-carrying capability, and it's fairly easy to overload them. Overloading reduces the shock absorber effectiveness and could account for the cupping problem, so I've been told. Since I've been more careful about weight in the car and with the same type/brand of tires, I haven't experienced a repeat of this problem. Maybe there is merit to the "overloading causes cupping" argument. What do you think?

REPLY: There is a lot of merit in what you say about overloading *any* car. Many people don't realize it, but if they check their owner's manual they'll find out that they overload their small cars when they put a passenger under every seatbelt. By the way, a tire that costs more than $100 may not be inexpensive, but it can be cheap.

COMMENT: I would appreciate your assistance in determining if the "pregnant cow" under my hood would create an unsafe hazard at some time. I purchased a 1983 full-size car with a V-8, four-barrel carburetor engine. After obligating almost a year's salary I feel like I am driving a cow out of the barn each morning as I drive my car out of my garage. There is a vibrating, poo-poo, moo cushion noise that comes from under the hood when I accelerate. On investigation it sounded like it was coming from the air filter.



I took it to the dealer for its 2500-mile check up and they confirmed that it was a normal occurrence — overflow pressure coming out in the air filter and that is the "flubber-groan" I hear. I couldn't believe that it would continue and took it back again. The diagnosis was the same.

The dealer suggested I try super unleaded gas, but that gas didn't eliminate the clatter. The noise, 90 percent of the time, is only when I am accelerating from a slow start or stopped position. The noise is gone once I'm on the highway (maybe the engine's noise is so much clatter at that time that it's drowned out). The vehicle sounds like a diesel and I do not own diesel.

It is very frustrating to buy a new car and have the dealer say with a shrug of his shoulders, "it's normal for it to do that."

Is the noise something that I am going to have to tolerate? What is the alternative (short of trading)? Do you have any suggestions on correcting the problem? Do you think it could be other than the air filter area that might cause some engine problems at a later date?

REPLY: First things, first: I don't know what the problem is, but having seen more than my fair share of shrugged shoulders I do have a suggestion on how to get the car fixed.

Continue to take the car back while politely, but firmly, telling the dealer that "while the problem may be a normal occurrence to them, you don't think you should have to put up with it." And then tell them (remember: politely, but firmly) that if they can't fix it you want the district or regional service representative to look into the problem. If you don't get any satisfaction from the district or regional service representative there are service people that s/he can refer you to up the chain to the manufacturer.

I say firmly because you have to be firm to get their attention. I say politely because one of the first questions the representative is going to ask both you and the service manager is: "How has s/he been treating you?" You can bet if you answer that you haven't been treated very nicely, the service manager's job is on the line. You can also bet that if the service manager says you've been patient and understanding, the higher-up will be more willing to go the extra mile necessary to get your problem solved.

COMMENT: You say in your November 1983 issue that we can choose between economy or care when first starting and driving a car. I

was taught in college that idling a cold engine causes two things: 1, slow warm up; 2, wear due to acids caused by combustion wearing down the cold metal of the engine. I was taught to move out as soon as possible because driving brings an engine up to operating temp quicker and reduces acid wear which is most active on cold metal.

REPLY: You were taught right. However, I don't know too many college instructors who would consider 2000 rpm an idle.

What I originally suggested for the "best" care of a car was once the engine oil was fully circulating to hold the speed at 2000 rpm until the water temperature gauge started to move, then drive off, shifting at 2500 rpm. For the most economical operation I said you could start driving as soon as the car would move without stumbling.

While you're right about an engine warming up fastest when being driven, what is the sense in warming it up at the expense of beating the insides apart because they are laboring to pull the vehicle before they're ready to do the job?

Holding the engine at 2000 rpm until the water temperature starts to rise will warm the engine up almost as fast as actual driving without putting any undue stresses on it.

COMMENT: The Saab company for many years has been manufacturing front-wheel-drive vehicles and has not been doing too badly using these same vehicles in a wide variety of races (paved surface to cross country). A while back, two of their drivers put out a unique packet of information on the do's and don'ts of front-wheel-drive driving and why. The information did get a bit technical and mentioned some unusual driving techniques (shifting a manual transmission without bothering with the clutch?) but overall gave a very good insight as to the why's and why-not's of many driving "habits." *Car and Driver* did a synopsis reprint/interview of this same material about four years ago. May I suggest this as an area of concern that you haven't sufficiently scratched?

REPLY: You're right about the information that Saab publishes. That's why most of the skid control tips we've been handing out for years have come from the Swedish firm's car division.

Magazines such as *Car and Driver* and *Road & Track* are for what we call enthusiast drivers, whereas DRIVER is for all drivers, especially those who don't have much experience behind the wheel. The type of information you're suggesting is great for experienced drivers who are interested in getting the most performance out of a vehicle that it can deliver and are willing to expend the energy necessary to extract that performance from the machine and themselves. The same information in the hands of an inexperienced driver is downright dangerous.

Perhaps the best example I can use to show what I'm talking about occurred while I was attending the racing driver school for the September 1983 issue.

One of the students (who drove a high-performance, turbo-charged street car daily) showed up with more than 15 years of reading articles like you talk about from *Car and Driver* and *Road & Track*. And he had been applying all these tips to his driving (including clutchless shifting). What he ended up doing during the school was unlearning *all* this magazine information before he could start to learn how to really drive. He did graduate from the school and he did learn how to drive, but he spent more time in *consultation* periods with the instructor than any of the other students. Also, as a result of all the time he spent unlearning techniques that were too far ahead of his skills, he was not as developed as the other students when the course was over.

I might also point out that DRIVER is an accident prevention magazine. You won't find articles about radar detectors, how to beat speeding tickets, how to spot unmarked police cars, how to get a driver's license from more than one state at a time, or why the 55 mph speed limit should be rescinded on these pages. What you will find are tips on how to be a safe, responsible driver regardless of your experience level.

COMMENT: I'm sure that you are aware that most brake fluids absorb moisture (the exception being silicon fluids), and if you don't want "frozen" brake cylinders after prolonged storage, the brake system should be flushed and filled with new brake fluid shortly before storage and the master cylinder should be sealed when laying the vehicle up (cover with a plastic bag?). At one time it was recommended that brake systems be flushed annually. I don't know if that still applies with the newer fluids, but I usually partially flush my vehicle's every other year. This is just info for a system that is usually ignored until it doesn't work.

REPLY: And good info it is. But I do have one question: How did you get access to our future stories list? Flushing the brake system is one of the Backyard Mechanic stories planned for 1984.

COMMENT: I hope that the old engine oil drained out in the November 1983 Backyard Mechanic story wasn't just dumped into a nearby ditch.

REPLY: No, when the drain container is full the oil is taken to an oil recovery station. For the location of one near you, contact your installation auto hobby shop or ask at a service station or question a counter sales representative at your parts store.

EDITOR'S NOTE: If you have a general interest automotive comment that you would like a reply to, and feel others could use the information also, send it to:

DOUBLE TECH
DRIVER MAGAZINE
HQ AFISC/SEDD
NORTON AFB, CA 92409

The Backyard Mechanic

Some people say the days are numbered for do-it-yourself mechanics because cars are becoming too complicated to work on. At DRIVER we say that the more complicated cars become the more people are going to start doing some of their own maintenance and repairs. We reason that the more maintenance and repairs the individual can do, the more money s/he will have available for the $35-an-hour charges when the vehicle absolutely has to be taken into the shop.

In addition, the price of newer vehicles is forcing many people to keep their cars longer. So, to improve upon the economy of having older cars, they are also doing their own mechanical work.

To perform your own maintenance and repairs you need a little special knowledge, a place to work and the right tools.

Features such as this Backyard Mechanic article you're reading provide the know-how.

The ideal place to work is, of course, the base auto hobby shop. Besides being the ideal premises, auto hobby shops come complete with all the necessary tools. There are also people available at the auto hobby shop who are willing to help with the know-how end of the job.

However, for many of you the auto hobby shop is not easy to get to, so you must work at home. It is also understood that not everybody is going to have a good workshop or garage available. If anything more than routine maintenance is to be carried out, some sort of suitable work area is essential. For example, overhauls and major repairs should always be completed under a roof.

Regardless of the working conditions, you're going to want a workbench or table. If you don't have one, a wide board laid across a couple of concrete blocks might do the trick, although the height will be far short of perfect.

You'll also need some clean, dry storage space for tools, as well as the lubricants, fluids, cleaning solvents, etc., you'll be using. Always keep a supply of clean rags and old newspapers on hand. Old towels are excellent for mopping up spills. In fact, many backyard mechanics use paper towels because they're readily available and disposable.

A word of caution here: Don't keep dirty newspapers and rags around. They're a fire hazard. Speaking of fire hazards, always have a fire extinguisher rated for gasoline and electrical fires handy (See "Fire Away" in the December 1983 DRIVER).

You can cut open a large cardboard box and lay it on the floor under the car to keep the area clean. Besides, it's easier to find those small parts that always fall and roll under the car on this surface than it is on concrete or dirt.

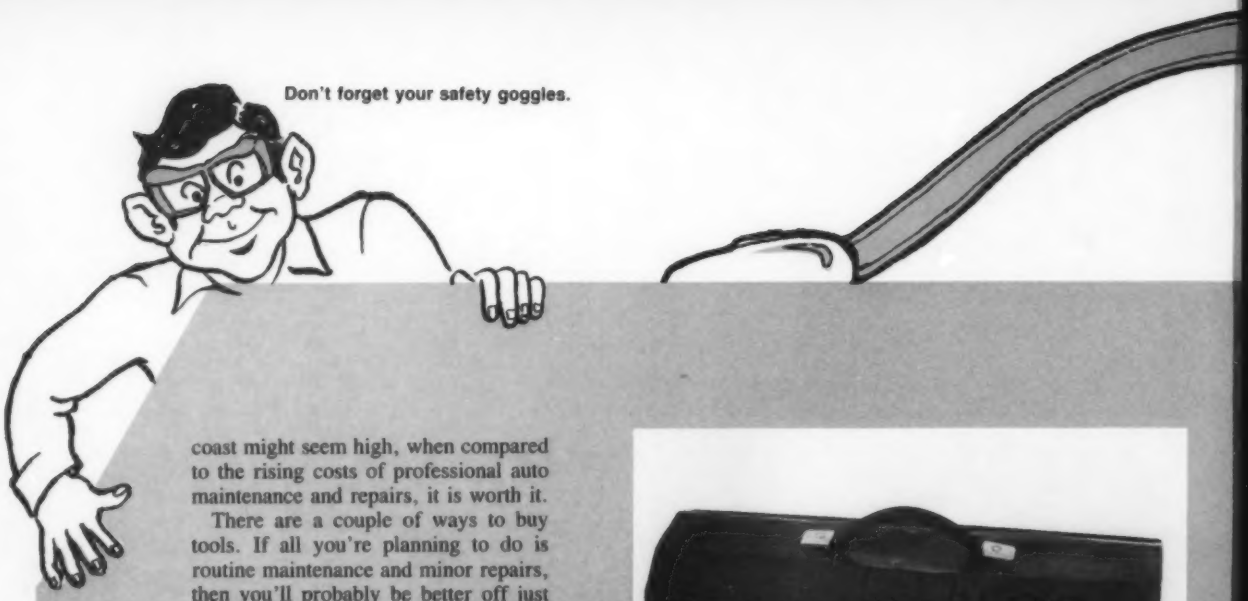
The other component necessary to do your own maintenance and repairs is a selection of good tools. While the initial

continued

Your basic tool kit is built around a combination wrench set (box and open ends combined in one wrench) in sizes ¼ to 1 inch or 6 to 19 mm. When you start tackling more difficult tasks such as overhauls and major repairs you may want to add a set of wrenches that are just box end and another set that's just open end.

An 8-inch adjustable wrench is a must for every basic tool kit. Later you'll probably add a 6-inch model and then a 10-inch one, too. Another wrench you'll want to have in your basic kit is a brake bleeder.

TOOLS



Don't forget your safety goggles.

coast might seem high, when compared to the rising costs of professional auto maintenance and repairs, it is worth it.

There are a couple of ways to buy tools. If all you're planning to do is routine maintenance and minor repairs, then you'll probably be better off just picking up individual tools. On the other hand, if you have bigger plans, it might be a good idea to buy a modest tool set from one of the larger retail chain stores. When you buy tools in sets you save money over the individual tool purchase price and you often get a good tool box to boot.

As more tools are needed, add-on sets and individual tools can be bought to in-

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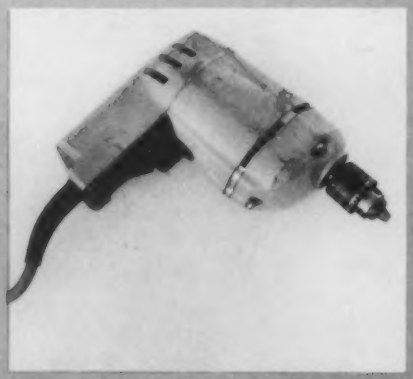
Lay out a few bucks for a good tool box — well, at least one that's better than this. It'll save you a lot of problems in the long run.



You won't have done too many repairs before you find the need for an electric drill. While a ¼-inch model will do the job, the ⅜-inch types are preferred. You'll also need a set of high-speed steel drill bits, a center punch, drifts, pin punches (1/16, ⅛ and 3/16), a scribe and an 18-inch machinist scale with both fractions and decimals.

While a good quality stroboscopic timing light with inductive pickup is a special tool, it is absolutely necessary for tuning most engines and is, therefore, part of the basic tool kit.

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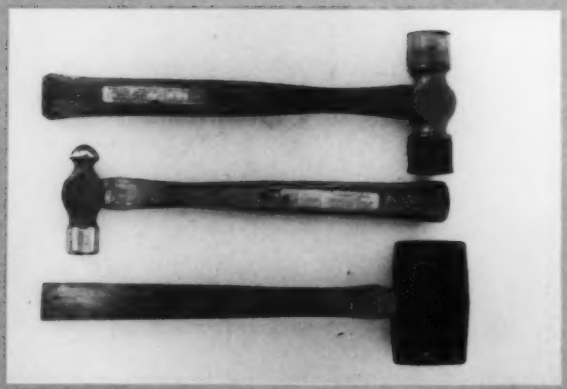
A combination tachometer/dwell meter is another special tool that is required for tuneups and the basic tool kit.



The soft-faced hammer (plastic/rubber) will be one of the first tools you add after you've completed your basic tool kit. As you take on bigger jobs you'll end up buying a ball peen hammer (8-oz.), also. And then a regular rubber hammer will find its way in.

It wouldn't be a good basic tool kit if you didn't have a tire gauge and a shop manual for the specific car you're working on.

Adequate lighting is essential for safe work, so invest in an Underwriters' Laboratories approved drop light as part of your basic tool kit.

crease your basic selection. Building your set gradually not only spreads the cost over a longer period, it gives you the freedom to choose only the tools you'll actually use.

Regardless of where you buy your tools, try to avoid purchasing cheap ones, especially when getting screwdrivers and sockets. Cheap tools just don't last as long and the expense of replacing them will quickly become more than the initial cost of quality tools.

For the backyard mechanic there are three sets of tools. There's the basic set for maintenance and minor repairs. Then there are those tools used for major repairs. And, finally, there are special tools.

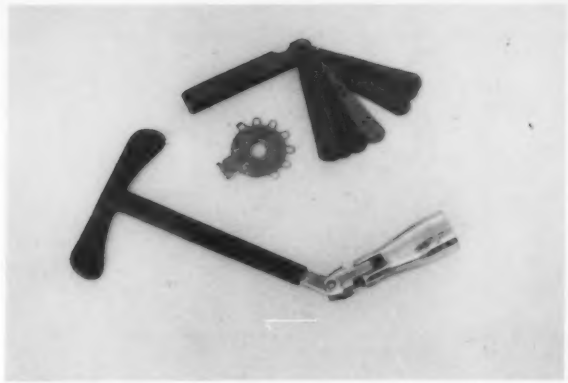
continued

HOW ABOUT A LITTLE RESPECT

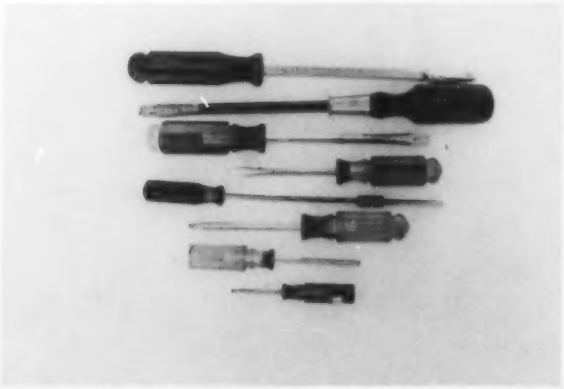
It makes sense to treat your tools with respect: they're expensive. Keep them in a clean and usable condition, and store them properly when not in use.

- Always wipe off any dirt, grease or metal chips before putting tools away.
- Never leave tools lying around in the work area.
- When the job is done check the work area
- When the job is done check the work area (especially under the hood) for tools that may have been left behind.
- Some tools (such as screwdrivers, pliers, wrenches and sockets) can be hung on a panel mounted on the garage or workshop walls.
- Other tools should be kept in a tool box or tray.
- Measuring instruments, gauges, meters, etc., must be carefully stored where they cannot be damaged by weather or impact from other tools.

Tools that are used with care and stored properly will last a long, long time. But, even with the best care, tools will wear out. When a tool is damaged or worn out, replace it. The work will be safer and more enjoyable if you do.



Required in every basic kit is a spark plug wrench with rubber insert, a spark plug gap adjusting tool with feelers and a feeler gauge set.



Every tool kit has assorted good screwdrivers in it. You start with a standard 5/16 x 6-inch and a Phillips No. 2 x 6-inch. Then you add two more standards (¼ x 6-inch and stubby 5/16) and two Phillips (No. 3 x 8-inch and No. 2 stubby). Building from there is based on your needs.

Pliers are another must for your basic kit. You'll have to have at least your basic 6-inch combination (duckbill) pliers. You'll find that you can also use a good set of needlenose and diagonal-cutting or linesmans pliers, too. A set of Vise-grip pliers is always helpful. It also won't be long before you find a need for spring clip pliers (internal and external models).

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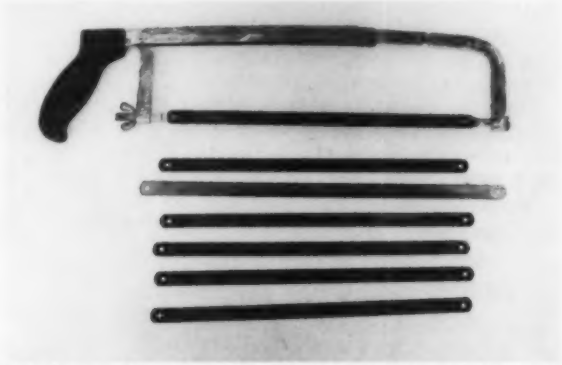
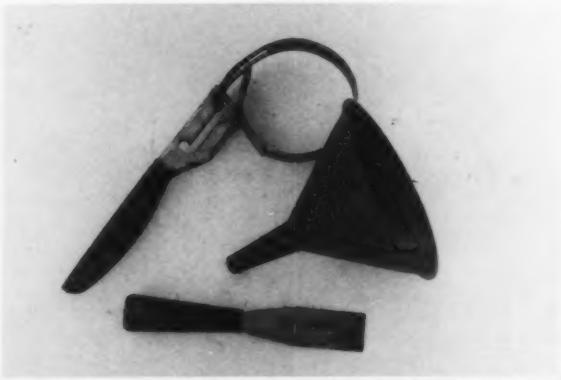
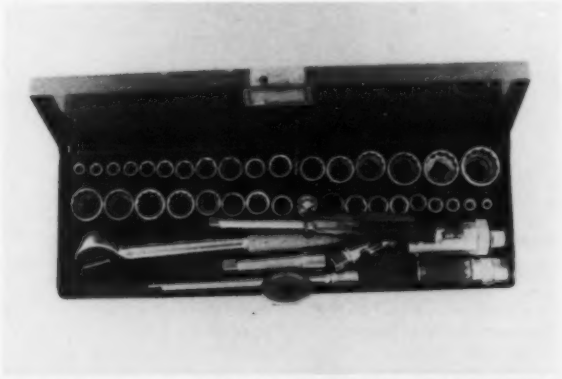


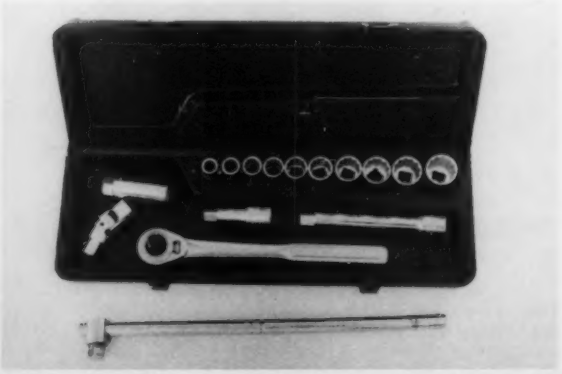
A hacksaw with an assortment of blades is as much a part of the basic tool kit as the grease gun, oil can, wire brush and fine emery cloth.



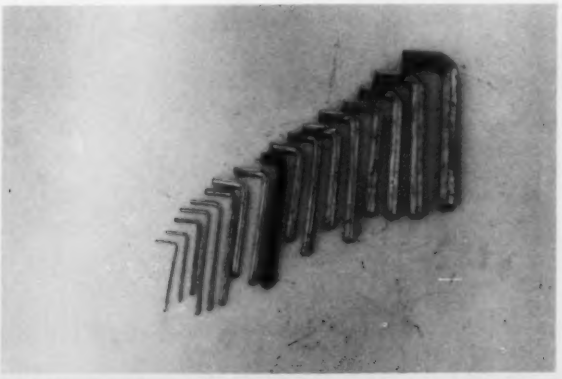
An oil filter wrench, funnel and gasket scraper are all parts of the basic tool kit. You'll also need a drain pan as well as a battery post and cable cleaning tool.



One step above the basic tool kit is the ⅜-inch socket set with ratchet drive, 3- and 6-inch extensions, universal joint and 12-point sockets. This set is in both English and Metric sizes and includes a ¼-inch drive set as well as spark plug sockets. The ¼-inch set is one of those "nice to have" items.



Major repairs will require a ½-inch drive socket set with reversible ratchet, various extensions, universal joint and a breaker bar.



An Allen wrench set will probably find its way into your tool kit eventually. If you go shopping for one, get either ⅛- to ⅜-inch or 4 to 10 mm sizes.

continued

The basic set is the minimum necessary for the simpler jobs such as routine maintenance, servicing and minor repair work. As the backyard mechanic's confidence and experience grows, so does the tool set. Eventually, the basic tool kit will expand into a major repair tool set.

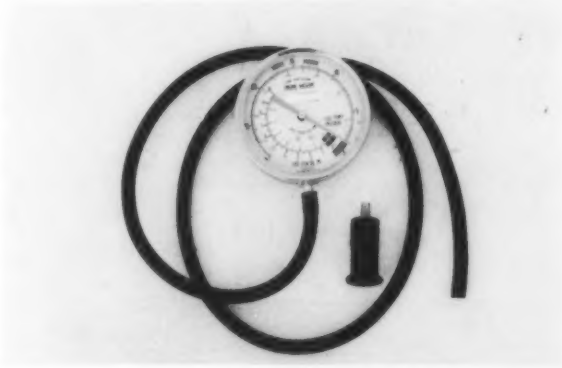
At the same time, the backyard mechanic will add those special tools s/he feels are needed because of their frequent use. The problem with special tools is that they are expensive to buy or require special training to operate. Unless they are used often, they just aren't worth the cost. This is especially true since most of them are available at rental shops.

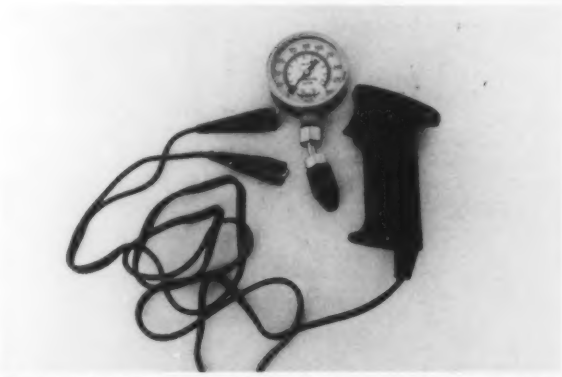
SPECIAL TOOLS

This is a list of special tools and instruments that are widely available, but not those special tools produced by individual vehicle manufacturers for their dealer service departments to use on unique jobs. Generally, there are alternatives to doing some of these unique jobs that require the dealer-only special tools. However, there are cases when the work is going to have to be turned over to a dealer, a repair shop or an automotive machine shop simply because you can't buy (or afford to buy) or borrow the proper tool.

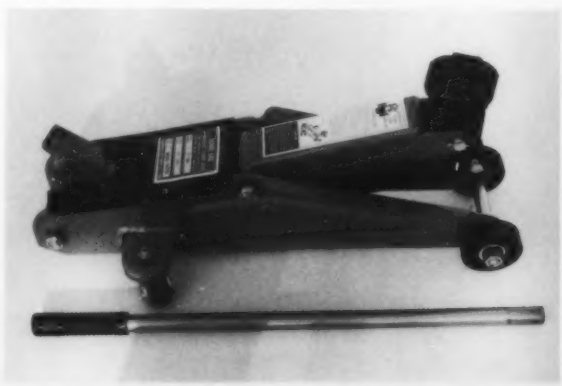
- **Valve spring compressor**
- **Piston ring groove cleaning tool**
- **Piston ring compressor**
- **Piston ring installation tool**
- **Cylinder ridge reamer**
- **Cylinder surfacing hone**
- **Cylinder bore gauge**
- **Micrometer(s) and/or dial calipers**
- **Hydraulic lifter removal tool**
- **Balljoint separator**
- **Impact screwdriver**
- **Dial indicator set**
- **Hand-operated vacuum/pressure pump**
- **Cable hoist**
- **Brake spring removal and installation tools**
- **Universal electrical multi-meter**

In some cases you might consider getting several of the neighborhood backyard mechanics together to split the cost and use of special tools.





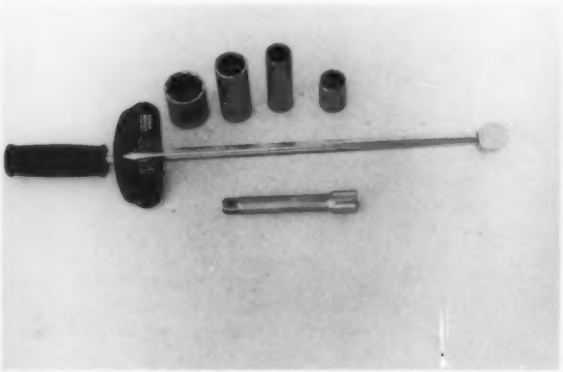
Among those helpful special tools are a vacuum gauge (#20), a compression gauge and a remote starter.



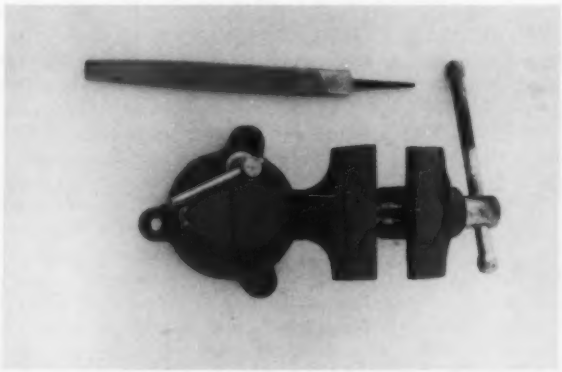
The kind of jack that comes with your car is for emergency use only and has no place in your maintenance or repair workshop. Buy yourself a good floor jack and you'll never know the trouble (and back aches) you've avoided. Make sure there's a safety margin between the jack's rating in pounds and the weight of any vehicle being lifted.

Included in the basic tool kit are jack stands, wheel chocks and a tarp for you to lay on when working under the vehicle. As you advance in your work you'll probably buy a creeper, too. If you start doing more major repairs, a second set of jack stands will come in very handy.

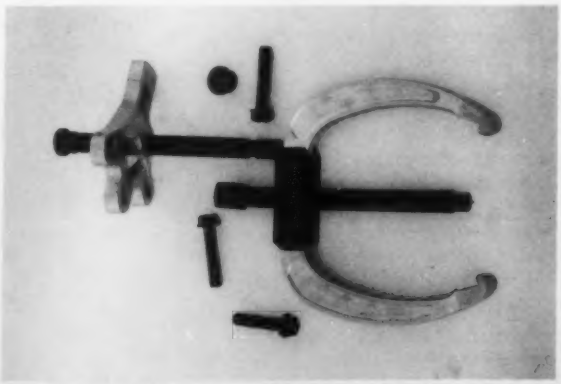
Coveralls (or an apron) and gloves are part of any basic tool kit. The two sections of carpet are used to protect the car's fender finish when leaning into the engine compartment. An old blanket or bedspread will do the same job those fancy vinyl-covered pads made especially for this purpose do.



While the torque wrench is considered a major repair tool, it is helpful in the basic tool kit, also.



As your work grows you'll find a need for assorted files as well as a vise with at least a 4-inch opening. At this point you'll probably also find a need for a larger wire brush and a cold chisel (½-inch).



These are two types of universal gear or wheel pullers that might be among the special tools you'll consider someday.

BACKFIRE
LETTERS to the EDITOR

MOST II IN AVAILABLE TIME

I have been reading your magazine now for six years. It is always full of factual and informative artaicles. Your article in the November 1983 edition on MOST II is an excellent example. MOST II is a good test of riding ability, but the biggest reason for complaint was not listed in the article.

The big problem is that not all commands and bases are using MOST II. This causes much frustration when going PCS. Coming from Japan, where MOST II is not in use, into ATC caused me a great deal of aggravation. This was due mainly to the fact that the testing that was done in Japan gave me a much better indication of riding ability than does MOST II. The visual evaluation done in Japan lasts for approximately three hours, compared to the 15 minutes that it takes for MOST II. If the testing procedures could be standardized, there would be a great reduction in the number of complaints.

SSgt. John H. Wilcox, Jr, USAF
Vance AFB, OK 73702

We agree with you that the test the civilian Japanese give for licensing is a terrific evaluation of riding ability. But it can't be done in 15 minutes. For the time available, the MOST II is a really good test.

VISOR UP . . . DOWN

I have just received the November issue of DRIVER Magazine. I enjoy the magazine thoroughly, especially the articles pertaining to motorcycles and motorcycle safety.

I read the MOST II article with great interest, however, the pictures that accompanied the article showed a most dangerous safety hazard. In two of the pictures the individual riding the motorcycle has his visor up. This is OK if you are sitting still but when the motorcycle is in motion the visor should be down.

I have been at this remote assignment for four months now and I am looking forward to getting back to the states so I can get my motorcycle out of storage and rehone my skills before I hit the streets again.

An article I would like to see would be one on touring through the various states; Florida for example. Perhaps you could compile a list of sights to see in the various states.

Keep up the good work.

A1C Zack Jones
Hofn NI, Iceland

Look real close and you'll see that the individual on the motorcycle is wearing eye glasses which are considered eye protection by the Air Force (See 'What Is Eye Protection?'' in the December 1983 issue).

HELP

I am working for the Military Traffic Management Command (an Air Force funded U.S. Army unit)in Izmir, Turkey, as a Turkish national. We receive your magazine every month and I am very much interested in your articles about safe driving and especially on motorcycles.

I have a 250cc Turkish-JAWA made in 1982. JAWA is the only company which makes motorcycles in Turkey. Anyone who has a driving license can ride a motorcycle in Turkey.

We don't have any club, any books or any instructor to teach us how to ride safely or how to work on bikes. We can only learn from the old bikers or from the repair guys.

As you can imagine we don't have any official rules or helmet laws. I especially try to follow foreign magazines and yours to improve myself.

We don't even have the shops which would sell helmets, riding gloves, padded leather jackets, boots, etc.

Also, we are not considered as vehicles and most of the drivers ignore us in the streets and they think bikers are very bad and outlaws. I want to say STOP to this but we are not even educated on our machines yet.

So I decided to write you. I need more information about safe riding and motorcycle maintenance, and your ideas about making the other drivers learn that we are on the road too. Can you send me some books or any kind of written information? If you can't, can you give me some addresses to write?

I'll be very thankful for your help.

Mehmet Akyildiz
MTMC-TTU IZMIR
APO NY 09224

As you're reading DRIVER regularly you're getting the information that we have available as timely as possible. However, we have forwarded your request for assistance to the Motorcycle Safety Foundation, MSF being the authoritative source for motorcycle safety enlightenment. In the meantime, you should contact your local safety office and ask them for help and support. If they don't have the necessary information on hand, they should be able to acquire it from higher headquarters. The other magazines that you've been reading are ideal sources for the safety gear that is not available locally — that is: mail order. If you cannot find a way of contacting the Turkish-JAWA company, then the same magazines may have ads for shop manuals of other JAWA motorcycles that might closely resemble your bikes mechanically.

FREEDOM OF CHOICE

I write again to say how much I enjoy reading your magazine — even *more*, it promotes healthy discussion and argument, and makes even the thickest amongst us . . . think!

I must comment on the letter in your October issue from an SP 6 Bradley T. Scott. The stupidity of this person is beyond belief and your added comment does much to explain that such unprotected motorcyclists cost other safety conscious road users far too much in burials and head repairs.

Should he come to Europe he'll have no choice in the matter. Over here *everyone* on a motor "two wheeler" wears an approved helmet — thro' FREEDOM OF CHOICE! Howzat? I hear you say? As with the mandatory wearing of approved seat belts in the front of cars, the vast safety conscious majority of British people have exercised their democratic freedom — and freedom to choose as follows.

Through their Parliament at Westminster, laws have been passed to ensure that stupid road users who failed to protect themselves voluntarily — now must! — or pay large monetary fines. Thus the people have exercised their freedom of choice to the benefit of all.

By the way, the seat belt law, only 10 months old, looks like saving nearly 1,000 lives (or 20% of all road fatalities) in the first year. Doctors also, are now putting their skills to more deserving causes, instead of mending smashed heads. When America wakes up and brings in such a law, over 10,000 lives will be saved each year. Please don't let a foolish minority like Bradley T. Scott, insist that this extra 10,000 must die each year because of his "free society." What utter BRAVO SIERRA!

N.J.J. "Red" DUNNINGHAM,
Sqn. Ldr. RAF (Rtd)
RAF Mildenhall, GB

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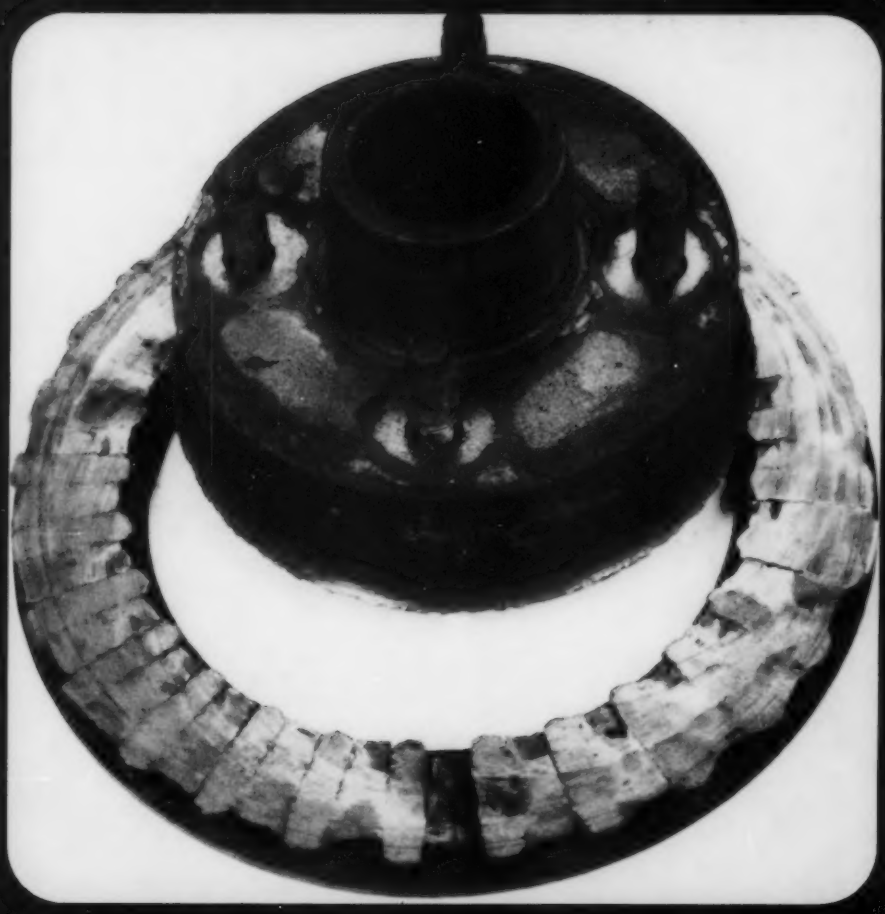
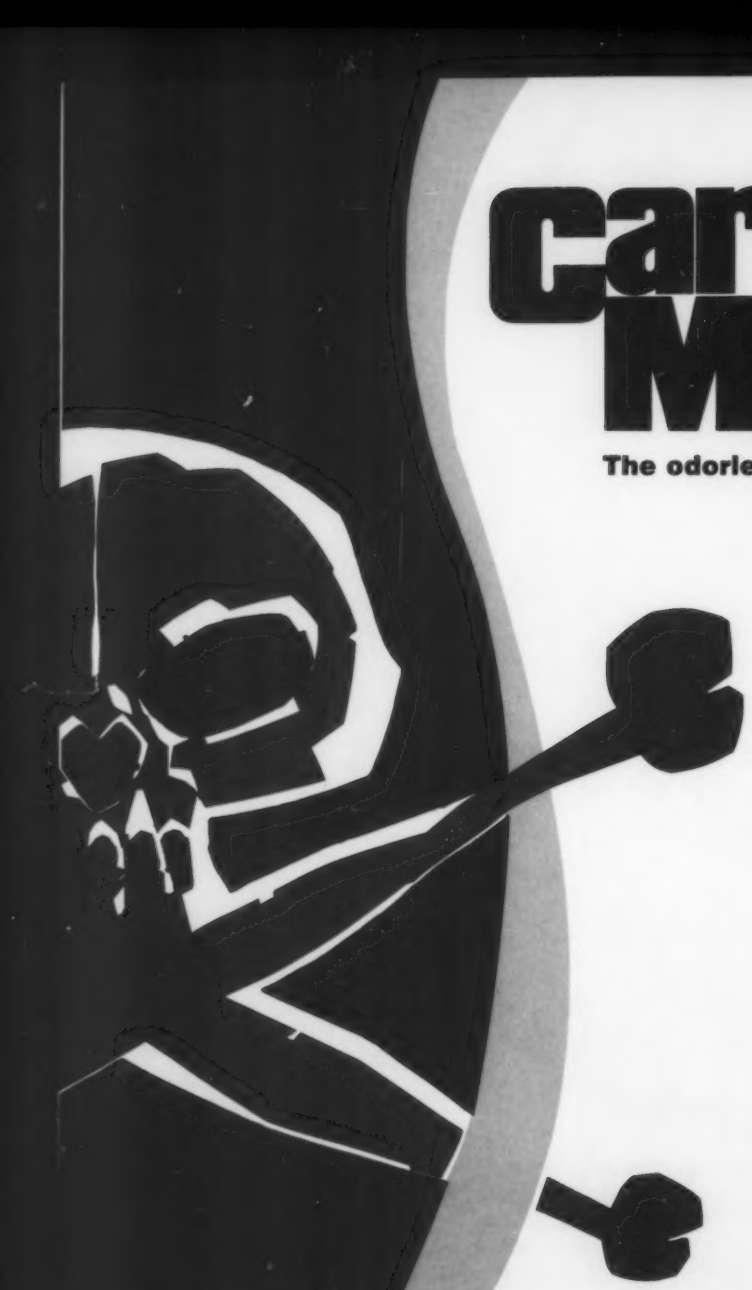


LUCKY BREAK!

How many stops were left in this brake rotor at the time it was removed from the car? Precious few, claims the Car Care Council, who say the part separated into two pieces after the mechanic removed it from the car. Wear and rust had deteriorated it far beyond the danger point, but miraculously, the owner managed to avoid an accident.

How are YOUR Brakes?

car care council



carbon Monoxide

The odorless, tasteless

Poison

It is absorbed into the red blood cells 200 times more readily than oxygen. When it latches onto a red blood cell, it stays. It prevents that cell from carrying oxygen. If you continue breathing CO, it accumulates. Two deep breaths containing a 2% concentration can kill you in two minutes. One deep breath can cause brain damage.

Two young Air Force members died from carbon monoxide poisoning this winter when their vehicle was stranded on a snow-filled road. The vehicle's engine, like all internal combustion engines, produced carbon monoxide and the occupants did not make provisions for fresh air. Although they did get out of the vehicle occasionally to breathe fresh air, that was not sufficient to offset a relatively continuous exposure to accumulating CO.

remember:

- **Automobile exhaust contains carbon monoxide Do not stay in a closed car with the engine running. Keep the exhaust system in good repair.**
- **Do not work on your car or motorcycle in a closed garage.**
- **Heaters, stoves, furnaces, and camp lanterns all produce carbon monoxide.**
- **If something burns fuel it must either be vented or used outside.**

Be Aware of Your Need for FRESH AIR